

Appl. No. 09/654,253
Amendment dated July 14, 2006
Response to Office Action of May 15, 2006

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Remarks/Arguments

Brief Historical Background

On November 17, 2004 a Final Office Action concerning the above identified Application was mailed to Applicants. On January 18, 2005 an After Final Amendment & Response including a Rule 1.131 Declaration signed by the Applicants and a Declaration by Applicant's Representative in Accordance with MPEP 608.01(p) was filed with the US Patent & Trademark Office. On March 1, 2005 an Advisory Action was mailed to Applicant's Representative by the US Patent & Trademark Office. On April 1, 2005 an Amendment, a further Rule 1.131 Declaration signed by the Applicants, and a Request for Continued Examination was filed. On June 28, 2005 an Office Action was mailed to Applicant's Representative by the US Patent & Trademark Office once again indicating that the Rule 1.131 Declaration was not effective to overcome a Zhang et al reference. On September 28, 2005 a response to the June 28, 2005 Office action was filed together with a further Rule 1.131 Declaration (Declaration under 37 CFR §1.131) signed by the Applicants. On December 16, 2005 another Office Action was mailed to Applicant's representative. On March 16, 2006 a response filed in response to the December 16, 2005 Office Action. On May 15, 2006 a Final Office Action was mailed to the Applicant's representative.

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Status and Summary of this response

Claims 1-20 are pending and stand rejected on varying grounds under 35 U.S.C. 103(a).

No claims have been amended. A listing of claims with the present status has been provided strictly for the Examiner's convenience. No new matter has been added by any amendment.

In view of the comments below, Applicant respectfully requests that the Examiner reconsider the present application including claims 1-20, withdraw the rejection of these claims, and move this application to allowance.

a) Claims 1-3 and 10 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Michael et al., "Statistical Modeling of Device Mismatch for Analog MOS Integrated Circuits", IEEE Journal of Solid-State circuits, Volume 27, Issue 2, February 1992, pages 154-166, in view of Burrows, et al. (U.S. Patent No. 6,397,117 B1).

Claim 1 and claim 10 are independent claims with claims 2-3 dependent on claim 1. As noted in the March 16, 2006 response Michael et al is fundamentally different than the claimed invention, e.g., the present invention as recited by claims 1 or 10 is facilitated by a web interface, e.g. a browser or like interface; rather than being implemented in a CAD environment, with known associated large overhead, expense and expertise requirements, including significant software maintenance and distribution costs. The Examiner is referred to the March 16, 2006

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Response for additional comments that characterize Michael et al and the various shortcomings thereof as to teachings of the present claims.

Additionally, the present invention allows for a plurality of input parameter data or a range of data, which is not contemplated by Michael et al (see graphical interface definition of claim 1 or claim 10) (Examiner has agreed that Michael et al does not anticipate these features). As noted in an Amendment filed earlier, responsive to a February 26, 2004 Office action, the graphical interface as defined by claim 1 or claim 10 provide a system with the ability to receive multiple values, in possibly different ways (e.g., individually, in a string, in a range, or in a set) for each mismatch input parameter and generate a plurality of mismatch output data based on the overall entered mismatch input data combination. This is valuable because it enables a user to efficiently identify input parameter combinations with favorable (e.g., reasonably reduced) mismatch results.

Applicant further respectfully submits, after careful consideration, that the claimed plurality of string-of-data input parameter fields or plurality of range-of-data input parameter fields with claimed functionality of claim 1 or the graphical interface having a field for receiving sets (*note plural*) of data for a plurality of mismatch input parameters ... to generate output data based on the sets of mismatch input data ... of claim 10 are not shown or suggested by Burrows et al whether taken alone or together with Michael et al.

The Examiner refers to FIG. 2 and 5 of Burrows et al and erroneously construes these figures as showing a plurality of string-of-data input parameter fields that are provided for user selection. FIG. 2 depicts a schematic representation of a distributed CAD system (col. 3, lines

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48-50) which includes a CAD server station 22 and 3 client stations 26 (col. 3, lines 65-67) and does not show or suggest the claimed string-of-data input parameter fields or range-of-data input parameter fields or field for sets of data for a plurality of mismatch input parameters.

Burrows et al FIG. 5 shows a form that is completed by the user at a client station 26 and sent to the CAD server station 22. While the form shows a plurality of input fields, nothing indicates any of these fields are or could be string-of-data input parameter fields or such string-of-data fields pursuant to providing a plurality of input parameter data strings to the SITMM for generating results for at least one mismatch parameter over the plurality of input parameter data strings. Clearly a single entry in any one field as allowed by the FIG. 5 form is not and does not suggest a string-of-data input parameter field as claimed. Furthermore, nothing indicates that the form of Burrows et al is suitable for receiving more than one set of data, i.e., receiving sets of data, much less receiving sets of data for a plurality of mismatch input parameters and providing the sets of data to the SITMM to generate mismatch output data based on the sets of mismatch input data, as recited by claim 10.

The string-of-data input parameter field or sets of data as claimed is defined in the specification, e.g., with reference to FIG. 3 via the passage beginning at page 9, line 15.

".... The user will next enter the desired bias, geometry and temperature values into the data entry fields reflecting the number of values desired for each parameter. The data entry fields are comprised of three columns: a single-value data entry column 126, a string-of-values data entry column 128, and range-of-value data entry column 138. Each of these data entry fields is utilized as follows. The single-value data entry column 126 accepts single values for each geometry, bias and temperature condition parameter. The string-of-values data entry column 128 accepts a delimited list of values for each geometry, bias and temperature condition parameter. The range-of-value data entry column 138 allow the user to input sweeps of

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geometry, bias and temperature condition parameters by specifying the start, stop, and step values."

FIG. 5 of Burrows et al merely allows a single entry for each listed parameter rather than a string-of-data parameter field or sets of data as claimed. The claimed string-of-data input parameter field as defined, e.g., in the passages above, includes capability for entry of a delimited list of values, e.g., for each geometry, bias, and temperature condition and this results in sets of data. Nothing in Michael et al shows or suggests taken alone or together with Burrows et al. or any other reference of record, the claimed string-of-data input parameter field or the claimed range-of-data input parameter field or sets of data as recited by the claims.

Hence and in view of the above discussions, it is clear that Michael et al and Burrows et al do not show all features of either claim 1 or claim 10 and thus, at least by virtue of dependency, claim 2-3. Therefore, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claim 1-3 and 10 under 35 U.S.C. 103(a) as being unpatentable over Michael et al., "Statistical Modeling of Device Mismatch for Analog MOS Integrated Circuits", IEEE Journal of Solid-State circuits, Volume 27, Issue 2, February 1992, pages 154-166, in view of Burrows, et al. (U.S. Patent No. 6,397,117 B1).

b) Claims 4-6, 8-9 and 11-20 stand rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Michael et al., "Statistical Modeling of Device Mismatch for Analog MOS Integrated Circuits", IEEE Journal of Solid-State Circuits, Volume 27, Issue 2, February 1992, pages 154-166, and Burrows et al., U.S. Patent 6,397,117 B1 issued May 28, 2002, and filed May 28, 1998, in view of Applicants' admission.

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Claims 4-6, and 8-9 are dependent on claim 1 and claims 11-20 are dependent on claim 10. As noted above claim 1 and 10 are clearly allowable over Michael et al and Burrows et al in any combination. Nothing in Applicants comments (alleged admission) provides the teachings that are missing from the combination of Michael et al and Burrows et al and thus claim 1 and claim 10 are allowable over this combination of references. Therefore, at least by virtue of dependency, claims 4-6, 8-9 and 11-20 are likewise allowable over these references.

Furthermore, in support of this rejection, the Examiner mischaracterizes a number of comments in the specification as admissions by the Applicant, e.g., page 5, lines 8-10, "The mismatch tool 10 further comprises the data input and data output interfaces that may be comprised of any data interface method or system"; pages 8-9, changes for added new technologies, for example, make the technology available on the pull down menus, may be accomplished in a variety of methods by those skilled in the art; and at page 7, lines 7-9, "the five scenarios above are presented as examples of scenarios popular with those skilled in the art." Applicant fails to see how these comments can be taken out of context and then referred to as an admission that encompasses the specifically and affirmatively recited features of any of these claims.

For example, Applicant is utterly baffled as to how noting that data input and output interfaces being comprised of any interface method or system or noting that adding new technologies via a pull down menu may be accomplished in a variety of methods by skilled artisans, or noting that differential pairs, current mirrors, etc are popular scenarios can be viewed as an admission of any of the affirmatively recited features of claim 4-6 and 8-9 or corresponding

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claims 11-20. Even assuming *arguendo* that this was a proper interpretation, these comments do not show or suggest taken alone or together with Michael et al and Burrows et al, all of the features (e.g., specifics of the graphical interface) of any one of claims 4-6, 8-9 and 11-20.

In the Final Office Action of May 15, 2006 the Examiner found unpersuasive Applicants argument that Applicant's comments in the specification referred to above taken together with Michael et al (and Applicant will add Burrows et al) do not show all the specific graphical interface feature as claimed in claim 1-20. Applicant is somewhat confused as to where the Examiner was directing his comments on page 11 of the May 15, 2006 Final Office Action, so the discussions in the next two paragraphs may also apply to the rejection of claim 1 and 10 above?

In any event, the Examiner reasoned (top of page 11): "For example, Applicants have admitted at page 5, lines 8-10, "The mismatch tool 10 further comprises the data input and data output interfaces that may be comprised of any data interface method or system". The Examiner based on this passage then concluded "Therefore, using the interface provided in Michael's CAD environment meets the recited "graphical interface" limitation. Applicant respectfully refers the Examiner to the claimed graphical interface and notes that the claimed graphical interface is not "any data interface method or system" but rather, e.g., in claim 1

"a graphical interface to said SITMM, the graphical interface having at least one of: (a) a plurality of string-of-data input parameter fields to provide a plurality of input parameter data strings to the SITMM for generating results for at least one mismatch parameter over the plurality of input parameter data strings, and (b) a plurality of range-of-data input parameter fields to provide a plurality of input parameter ranges of data to the SITMM for generating results for at least one

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mismatch parameter over the plurality of input parameter ranges of data, wherein the mismatch modeling tool is configured for utilization via a web interface"

Furthermore, additional features are added to the graphical interface of claim 1 by claim 2-6 and others and Applicant strongly disagrees that any comments in the specification taken together with Michael et al and Burrow et al can be construed in good faith to show the claimed graphical interface feature of any of these claims.

The Examiner continues in the Final Office action and states "Furthermore, at page 7, lines 7-9, Applicants have admitted, "The five scenarios above are presented as examples of scenarios popular with those skilled in the art". The Examiner based on this concludes "Because these five scenarios are popular with those skilled in the art, at least, the required input parameters and desired output parameters as well as their format for each scenario are well known. In other words, the combined teachings of Michael et al., Burrows et al and Applicants' admission meet all the claimed limitations." Applicant respectfully and strongly disagrees that noting, e.g., that a current mirror is popular, shows or suggests all that the Examiner has concluded or all that any one of the claims recite.

Hence and in view of the above discussions, it is clear that this combination of references does not show or suggest all features of any of claims 4-6, 8-9 and 11-20. Therefore, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 4-6, 8-9 and 11-20 under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Michael et al., "Statistical Modeling of Device Mismatch for Analog MOS Integrated Circuits", IEEE Journal of Solid-State Circuits, Volume 27, Issue 2, February 1992, pages 154-166, and Burrows

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et al., U.S. Patent 6,397,117 B1 issued May 28, 2002, and filed May 28, 1998, in view of Applicants' admission.

c) Claim 7 stands rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Michael et al., "Statistical Modeling of Device Mismatch for Analog MOS Integrated Circuits", IEEE Journal of Solid-State Circuits, Volume 27, Issue 2, February 1992, pages 154-166, Burrows et al., U.S. Patent 6,397,117 B 1 issued May 28, 2002, and filed May 28, 1998, and Applicants' admission, in view of Hussey, U.S. Patent 5,826,269 issued October 20, 1998.

Claim 7 is dependent on claim 1 and claim 1 is believed to be allowable over Michael et al., Burrows et al., Applicant comments, and Hussey. Thus claim 7 at least by virtue of dependency is allowable over this combination of references. Therefore Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claim 7 under 35 U.S.C. 103(a) based on Michael et al., "Statistical Modeling of Device Mismatch for Analog MOS Integrated Circuits", IEEE Journal of Solid-State circuits, Volume 27, Issue 2, February 1992, pages 154-166, Burrows et al., U.S. Patent 6,397,117 B 1 issued May 28, 2002, and filed May 28, 1998, and Applicants' comments, in view of Hussey, U.S. Patent 5,826,269 issued October 20, 1998.

Accordingly, Applicant respectfully submits that the claim clearly and patentably distinguish over all appropriately cited references of record and as such pending claims 1-20 are

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to be deemed allowable. Such allowance is hereby earnestly and respectfully solicited at an early date. If the Examiner has any suggestions or comments or questions, calls are welcomed at the phone number below.

Although it is not anticipated that any fees are due or payable since this response is being timely filed within two months of the mailing date of the Final Office Action and no other fees are due or payable, the Commissioner is hereby authorized to charge any fees that may be required to Deposit Account No. 50-3435.

Respectfully submitted,

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